**REMARKS**

This application contains claims 1-22. Claims 1, 6, 7, 11, and 22 have been amended. The amended claims correct typographical errors without the introduction of new matter.

In particular, in Claims 1, 6, 11, and 22 the word "insulative" has been added to make clearer the distinction between the wiper ionizing surface and the statically charged surface of the insulative object. Claim 7 is rejected under 35 USC § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention. Claim 7 has been amended to recited "ionizing points" replacing "non-ionizing points." "Ionizing points" has sufficient antecedent basis based on claim 6.

Claims 1, 2, 5, 6-9, 11-14, 16, 19, and 20 are rejected under 35 U.S.C. §102(b) as being anticipated by Zins (U.S. Patent No. 4,422,483); Claims 1-9 and 11-20 are rejected under 35 U.S.C. §102(e) as being anticipated by Fujita et al. (U.S. 5,935,882); and Claims 1, 3, 5-7, and 9-11 under 35 U.S.C. §102(b) as being anticipated by Stewart et al. (U.S. 5,525,411). Applicant respectfully requests Examiner reconsider these rejections since the anticipation requirement under 35 U.S.C. §102 that every element of the claimed invention must be identically disclosed in a single reference has not been met. The cited prior art does not disclose "ionizing points" on the surface of the wiper to reduce the static charge from the surface of an opposing insulative object.

Applicant discloses "ionizing points" in paragraph 17 of the application as the ends and the bends of the electrically conductive microfibers. The ionizing points are disposed along the length of the ionizing static control strand and exposed at or extending minimally above the outer surface of the ionizing

static control strand. The ionizing static control strand includes soft fibers twisted together with a multiplicity of electrically conductive microfibers in electrical communication with one another.

Applicant discloses the "electrically conductive microfibers" in paragraph 20 of the application as typically about 0.5 to 50 microns in diameter and about 2 - 8 cm long. Preferred conductive materials for the electrically conductive microfibers include carbon, metal-coated carbon, copper, stainless steel, metal-coated acrylic, metallized acrylic, or electrically conductive polymers."

Additionally, the "ionizing points" are disclosed in detail in U.S. Patent No. 5,690,014 ('014), owned by Applicant, which is incorporated by reference into this present Patent Application Serial No. 09/855,924 (paragraphs 4, 17, and 27). The following theoretical explanation of the mechanism by which the ionizing points operate inductively is presented below as an aid to understanding of the ionizing points and the invention as a whole:

> '014, Column 1, lines 15-19:
> Static electricity is defined as surface storage of electric charge. This surface charge is caused by the transfer of electrons when two similar or dissimilar surfaces contact. The charge also creates a voltage field which attracts or repels other objects which are proximate to the field.

> '014, Column 1, lines 21-24:
> This voltage pressure or potential induces out from the surface in all directions when the charged object is in space. It is the induced

voltage pressure which allows the static charge to ionize.

'014, Column 1, lines 38-56:
The major problem in static control on insulators, e.g., plastics, synthetics, or paper, is that by definition insulators cannot be grounded. Further, when an insulative material contacts a grounded conductive surface, the insulator cannot give up its surface charge. (The term "insulative", as used herein, is defined by Section 2.2.2.4 of the Electronic Industry (EIA) Standards, EIA-541, page 3.) Also, there will be a transfer of electrons taking place due to such contact, which can further charge the surface of the insulative material. The insulative surface, having a greater affinity for electrons, will often build up a negative charge, while the opposite polarity generated on the conductive surface will instantaneously be conducted to ground. Thus, even if machine surfaces are made from a metal or other conductor(s) and are grounded, they cannot eliminate static charge buildup on non-conductive objects or materials coming in contact with them. Further, a static charge can be generated on surfaces of such non-conductors by their contact with grounded conductors.

'014, Column 6, lines 2-8:
The small cross-sectional area at each exposed microfiber end, fold, or sharp bend provides the required "ionizing points" to induce ionization. That is, the voltage pressure or potential at each microfiber ionizing point is

increased, inducing ionization of the air between the passing statically charged material and the microfiber ionizing points.

'014, Column 6, lines 42-44:
Ionizing points are randomly disposed along the length of the ionizing cord to remove static charge from insulative material passing the cord.

'014, Column 7, lines 50-57:
As each sheet passes across the grounded ionizing cord, static charge buildup on the sheet is neutralized by ionization. The ionizing cord described herein acts to neutralize the surface charge on materials on or near its surface, either by induction, ionizing the air in the electric field (or voltage field) to provide a path to ground for the excess charge, or by providing sufficient positive or negative charge to balance the surface charge.

'014, Column 7, lines 58-64:
The diameter of an ionizing cord is quite small and, generally, the ionizing points of the conductive microfibers extend minimally above the exposed surface of the cord. Thus, the ionizing cord may be installed so that few if any of the fiber ionizing points contact the surface from which static charge is to be removed.

'014, Column 7, lines 65-67, Column 8, lines 1-12:
The surface charge on a moving material, e.g. a sheet material, creates an electric field

around the material. Enough of the microfiber ends, folds, and sharp bends present throughout the cord are sufficiently close to the surface of the cord and are sufficiently small in diameter to act as inductive ionizing points. That is, the statically charged material's electric field becomes concentrated at these microfiber ionizing points at the cord surface as the charged material passes, ionizing the air between the charged material and the cord. The surface charge then flows across the ionized air and through the conductive microfibers to ground.

'014, Column 9, lines 58-67, Column 10, line 1: The efficient ionization of air between an insulating surface and the ionizing cord, reducing the static charge on the insulating surface, was achieved because sufficient grounded, conductive, ionizing points were present near or at the surface of the cord to induce ionization of air. The ionization provided the required path to ground to reduce the static charge.

As described above, the invention as claimed in the application removes the static charge developed on the surface of an insulative objects by ionization. Whereas, Zins (U.S. Patent No. 4,422,483), Fujita et al. (U.S. 5,935,882), and Stewart et al. (U.S. 5,525,411) only dissipate static charge that has developed on their own surface. None of the cited prior art remove static charge from another insulative object.

Claims 21 and 22 have also been rejected under 35 U.S.C. §103(a) as being unpatentable over Zins (U.S. Patent No. 4,422,483) or Fujita et al. (U.S. 5,935,882) in view of Larkin

(U.S. Patent No. 5,690,014). Applicant respectfully requests the Examiner reconsider this rejection because Zins (U.S. Patent No. 4,422,483) and Fujita et al. (U.S. 5,935,882) lack the necessary ionization elements, such as ionizing points, to induce a voltage pressure to provide sufficient positive or negative charge to balance the surface charge as described above. Therefore, the mere addition of an electric charging means to Zins (U.S. Patent No. 4,422,483) or Fujita et al. (U.S. 5,935,882) would not achieve the desired results of removing static charge developed on the surface of an adjacent insulative object.

Though no fee is required, in the event any fees are deemed necessary please charge any underpayment of fees to Deposit Account No. 03-2410, order 13445-102.

In accordance with Section 714.01 of the M.P.E.P., the following information is presented in the event that a call may be deemed desirable by the Examiner:

PETER J. BORGHETTI (617) 854-4000.

Dated: February 20, 2003

Respectfully submitted,
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13445-102-OARespA

**VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS**

1. (Amended) An ionizing wiper for removing static charge from an insulative surface, said wiper comprising,

a cloth having at least one surface; and

an ionizing point network, said ionizing point network including a plurality of electrically interconnected ionizing strands having a plurality of ionizing points, said plurality of electrically interconnected ionizing strands being connected to said at least one surface, whereby air between said ionizing points adjacent to the surface is sufficiently ionized to remove static charge from the surface.

6. (Amended) An ionizing wiper comprising,

a plurality of soft fibers; and

a plurality of electrically conductive microfibers having a plurality of ionizing points, said plurality of electrically conductive microfibers and said plurality of soft fibers being joined together to form a fabric, whereby air between said ionizing points adjacent to an insulative surface is sufficiently ionized to remove static charge from the insulative surface.

7. (Amended) The ionizing wiper as recited in claim 6, wherein said [non-]ionizing points being exposed on at least one side of said fabric.

11. (Amended) An ionizing wiper for removing static charge from an insulative surface, said wiper comprising,

a cloth being made of ordinary wiping material, said cloth including at least one outer surface, at least one wiper surface, and at least one edge; and

a plurality of ionizing points, said plurality of ionizing points being disposed on said cloth, said plurality of ionizing points being of sufficient density such that air between said plurality of ionizing points and the insulative surface is

sufficiently ionized to remove static charge from the insulative surface.

22. (Amended) The ionizing wiper as recited in claim 20, wherein said wiper further comprises electrical charging means for neutralizing static charge at the insulative surface, said electrical charging means is removeably attached to said grounding connector.